



Jr.  
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# Cummins Aerospace

Hysol<sup>®</sup> MB 50 Case History  
A visit with George Pineda & JR Mejia

YOUR ADVANTAGE IN AN INDUSTRIAL WORLD



# *Cummins Aerospace*

- 22 Multi-axis CNC's
- Supplier to major aerospace aircraft manufacturers like: Boeing, Lockheed, Northrop, General Dynamics, Rohr, Menasco, Airbus, Bendix/Allied Signal, and many others
- They are located in Anaheim, California

# The interview

- George Pineda-Operations Manager-Cummins
- JR Mejia-Maintenance & Purchasing-Cummins
- Steve Hernandez-sales-Hasco Oil Company
- Terry Humphrey Castrol
- This interview was held in December 2007 after six months of operation.



# *Cummins Aerospace (continued)*

- Their primary component manufacturing is focused on landing gear.
- 22 CNC's
- Multiple Metals
- Current Supplier was Valcool
- A change in chemistry warranted a test
- Significant usage with the replacement product



# History of fluids at Cummins Aerospace

- The product used was Valcool Aerotech HD
- There were some product changes at the coolant manufacturer that caused Cummins to want to trial new product as the newly supplied coolant apparently had lost some properties causing concern by the operations manager
- Cummins Aerospace decided to conduct a test of other products

# The Competition

- The product in the shop was Valcool Aerotech HD
- Products tested at Cummins Aerospace included:
  - Trim VHP H200
  - Blasocut 2000
  - DA Stuart 2063
  - Valcool (New)
  - Castrol Hysol MB<sup>®</sup> 50

# Metals used at Cummins Aerospace

- Aerospace grade aluminums including but not limited to: 7050, 7075, 2024, & 5056
- 300M Stainless steel
- Copper/Beryllium
- Ferrous Metals

# Criteria

- The Criteria for Testing
  - Good Tool Performance
  - Good Sump Life
  - Price per Gallon
  - Operator Acceptance
  - High Pressure applications with no foam



# The Competitor drawbacks

- Odors had an effect on acceptance
- Residues, cleanliness, build-up
- Tool performance diminished
- Dermal Issues
- Some of the products foamed in high pressure (1000 psi) foamed

# Issues with Hysol MB<sup>®</sup>50

- Dissimilar metals require protection the Hysol MB<sup>®</sup>50 was running at 6% this was not enough concentration to inhibit the contact completely
- Raising the concentration to 8% provided enough protection or barrier to keep the galvanic sensation from occurring

# Products manufactured with Hysol MB<sup>®</sup> 50



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# The Choice

- Hysol MB<sup>®</sup>50
  - Hysol MB<sup>®</sup>50 was chosen by Cummins Aerospace as there was marked improvement in performance, usage was greatly reduced from others tested, much cleaner running
    - 30-35% Reduced usage
    - 20% improvement in tool life
  - Great Operator acceptance over the competitive products.

# Good Maintenance

- Daily checks help as speeds and feeds effect the evaporative rates
- General observing helps
- Although the maintenance time is equivalent to the prior fluid the benefit is reduced usage and improved tool life

# About the Distributor and Value

- Hasco has been present with regular visits
- Hasco has trained the Cummins employees on the proper maintenance of the fluids
- Hasco troubleshoots as needed
- Not seen as just a supplier, but as a partner



# Cummins Aerospace Summary

- Hysol MB<sup>®</sup> 50
  - Runs a diversity of metals
  - Runs very clean
  - Uses up to 30-35% less product
  - Improves on tool life by 20%
  - No Foam
  - Longer sump life
  - Great operator acceptance



# Many Thanks to Cummins Aerospace & Hasco Oil!

- For more information on their company please go to [www.cumminsaerospace.com](http://www.cumminsaerospace.com)
- For more information on Hasco Oil Company please go to [www.hascooil.com](http://www.hascooil.com)
- Other Castrol sites are:
  - [www.castroljobshop.com](http://www.castroljobshop.com)
  - [www.castrol.com/industrial](http://www.castrol.com/industrial)